PROGRESSIVE EQUIPMENT®

CUSCO

# - Installation Manual -

00B 60J XXXX
e-con2 Electronic Damper Controller

Our objective is to develop your enjoyment of driving through motor sports

CARROSSER

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- Installation Manual -

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Thank you for purchasing CUSCO products. Please make certain that this instruction manual and the vehicle's factory service manual is fully read and acknowledged prior to installation. When transferring usage of the product, please make sure the instruction manual is given to the new owner with the product, or to anyone operating the vehicle. When this product or the vehicle equipped with this product is given/let borrow to others, please hand this manual to the person who receive the product or vehicle.

Wear protective eyewear and gloves.

## Please read this first

### Attention

A potential possibility of malfunction and (or) breakage can result to the product and (or) to the vehicle if this indication is ignored, if wrongful usage and (or) operation is performed.

- This instruction manual includes the usage and installation. Read this manual thoroughly before operating. Please keep this instruction in the vehicle at all times.
- This product is for off-road or competition use only. By reading this warning the customer acknowledges that Cusco products are not permitted for use on public highways.
- This product includes all components listed in this instruction manual. If there are any missing or damaged parts, please contact an authorized CUSCO retailer.
- Always disconnect the battery before beginning any type of work on the vehicle.
- CUSCO cannot be responsible for any loss or damage to the product or the vehicle, when used in combination with other product(s) and (or) unauthorized tamperment to this product.
- CUSCO cannot be responsible for any injury or damage caused to the individual or third party as well as malfunction of the vehicle, products and (or) accessories.
- This product and accessories can be changed without prior notice due to production and manufacturing reasons.
- CUSCO cannot be responsible for any factory OEM parts lost during temporary removal process when performing installation.
- Some components such as car audio and clock can lose memory when the battery is disconnected while installating. After completion of the installation process, recover the setting refering to each instruction manual. CUSCO cannot be responsible for lost settings.
- Perform periodical inspection. The durability of this product can vary depending the surrounding conditions and usage.
- CUSCO cannot be responsible for any voided factory warranty due to installation of this product.
- Acknowledge that the installation of CUSCO products will alter vehicle control characteristics. Operate vehicle with extreme caution after product installation.
- Always install products according to the automobile manufacturer factory service manual unless otherwise specified in this installation manual.

### ⚠ Danger

An immediate possibility of serious injury and (or) even death can be assumed to the individual and (or) to the third party if this indication is ignored and wrongful usage and (or) operation is performed.

- Any service to the car with removal of the parts should be performed by trained professionals at a properly equipped workshop.
- Resting, sleeping in the car, or working in the car or in the closed garage can cause carbon monoxide poisoning, which can be fatal. Must turn the engine off and keep the area well ventilated.
- Always place wheel chock to prevent the vehicle from moving.
- Be careful with wiring when making connections directly in relationship with driving equipment, such as engine, steering, brake, and air-bag.
- Always make sure that the wiring is done properly. Take extra caution when dealing with positive and negative polarity. Make sure that the wires are insulated and there are no loose wires. If any wiring is performed in error, it may cause a fire on this product and/or the vehicle. Please disconnect the battery terminal wires before beginning the installation process. In case if it is not possible to shut off the power supply, it is your own responsibility to protect yourself from any injury as well as avoid electric shock and/or short circuit which can cause damage to the product and/or the vehicle.
- Use and install Cusco products only as directed by the manufacturer. Do not modify product to fit unspecified application. Misuse of product may lead to serious injury or death.

### ⚠ Warning

An potential possibility of serious injury and (or) even death can be assumed to the individual and (or) to the third party if this indication is ignored and wrongful usage and (or) operation is operformed.

- Exhaust manifold, radiator, and engine can be very hot. Please provide sufficient cool down time before starting any installs.
- Exhaust manifold, radiator, engine can be extremely hot while the vehicle is running immediately prior to vehicle usage. There is high possibility of injury when coming in contact with such components.
- Keep clear from infants, small children, and animals. Keep small parts away to avoid accidents. (prevent the parts from being swallowed/inhaled)
- Exhaust pipe can be very hot. Wear proper protective clothing when working in or around this area.
- Avoid installing any product in areas that can interfere with vision of the front windshield, driving equipments, and/ or air-bag system and other safety features..
- Take caution when installing this product near elecrtic wires, water hoses, and air hoses. and avoid inflicting and damages to them. Damaging the electric wires, water hoses, and air hoses can cause shot circuit and/or critical engine damage.

### ⚠ Caution

An potential possibility of serious injury and (or) even death can be assumed to the individual and (or) to the third party if this indication is ignored and wrongful usage and (or) operation is operformed.

- Dropping and/or applying the excessive force to this product before or during installation can cause damage, resulting in malfunction of the product.
- This product is designed to be used in 12V power vehicles only. Do not install this product in different voltage supplied vehicle.
- Make sure to insulate the unused connector and wirings to avoid short circuiting.
- Always use the supplied hardware.
- Installiation of components on the passenger side or center section can interfere with safety standards. Please check within local regulations before installing.
- Use a soft cloth to clean the product gently. Using cleaners or abrasive agents can damage the product.

## Notes

### ⚠ Warning

- Installation by non-professionals and unauthorized shops voids product warranty.
- Always focus on driving first, and never on the gauge displays. This may cause vehicle accidents and can even result in death.
- Perform product setting adjustment and other operation when the vehicle is parked at safe place.
- Do not disassemble or apply any modifications to this product. Such alterations can cause vehicle accidents or product damage. This also voids the product warranty.
- If any problem is found (wet/odor/smoke/erratic movement etc.), stop using the product IMMEDIATELY and contact your local retailer. Prolonged usage with such symptom can lead to accident or vehicle damage.
- CUSCO cannot be responsible for any damages while using this product, or any damages caused by this product usage.

| | |
|---|---|
| **[ Part Number ]** | 00B 60J XXXX |
| **[ Application ]** | Street Spec-A & Street ZERO-A |
| **[ Product ]** | e-con2 Electronic Damper Control |
| **[ Description ]** | 40 way damper controller |

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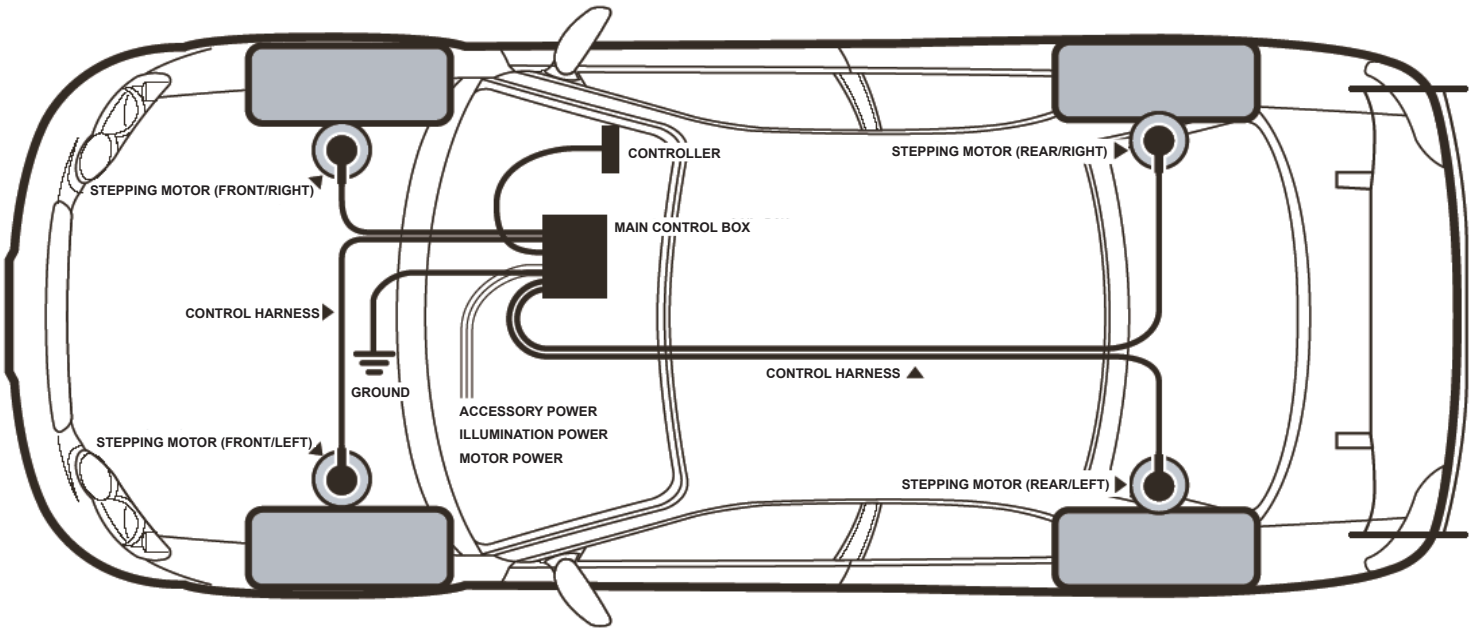
# WIRING INSTALLATION

⚠ **WARNING** Make certain to follow all precautionary details listed in Pg.2 before starting installation.




## 1. Power Wires Installation

- Accessory Power Wire (RED)
  Connect using the electro tap to any accessory wire (ACC 12V)

- Illumination Power Wire (YELLOW)
  Connect using the electro tap to any car audio system illumination wire (12V Light Switch)

- Motor Wire (FUSED)
  Splice and connect to any accessory wire (ACC 12V)

⚠ **WARNING** Confirm that the ACC 12V wire for the Motor Wire has plenty of voltage. Lack of power will result in insufficient motor operation.

- Ground Wire (BLACK)
  Securely connect to a chassis ground or any ground wire.

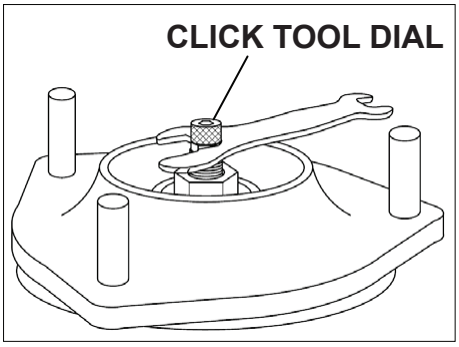
## 2. Control Harness Installation

- The control box harness features a smaller connector than the rest. Laying out the harness in the engine bay, trunk space, and interior cabin will make installation more easier.
  Connector ends are labeled per their designated points.
  - Yellow Tape = Control Harness (4m length)
  - Black Tape = Control Harness (5m length)

⚠ **WARNING** Keep the wiring harness away from heat, especially the harness routed inside the engine and trunk space. Avoid installation while engine is hot and allow sufficient cool down time before starting any work.

# MOTOR INSTALLATION

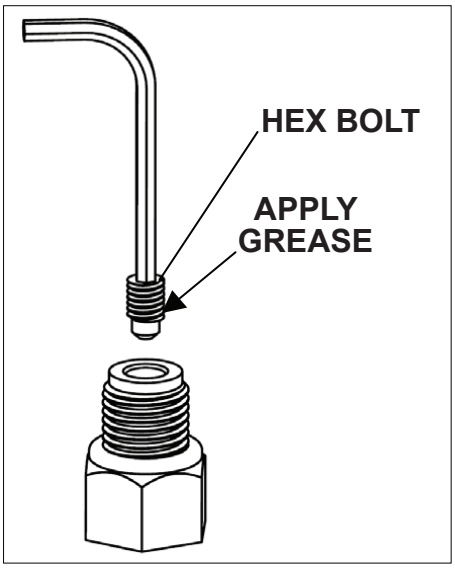
The motors are installed on top of the shock assembly (shock absorber, spring, upper mount) The shock absorber nuts will not be easily accessible following the installation of the motors so make sure they are torqued to the proper specifications. The motors can be installed with either the shock absorber assembly installed on the vehicle or off the vehicle but this is dependent on vehicle application. Make sure that the shock absorber top is clean and free from any external debris before mounting the motors.



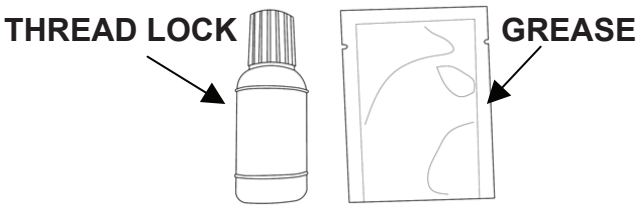

- Remove the click tool dial with the included spanner wrench

⚠ Confirm first that the suspension coilovers are e-con2 compliant. An attempt to install on a non-compliant suspension model may result in internal gas or oil leakage of the shock absorber. Confirm and proceed only after the model has been checked for compliancy.

⚠ Save and store the removed click tool dial in a safe place
Reinstallation torque specs: 2.5 N-m (0.25kgf-m)
(additional reference: approx 5˚ past hand-tightened point)




- After removing click tool dial, use the included 3mm hex wrench to remove hex bolt.
- Confirm first that the motor shaft slides in freely on the hex bolt.
- Apply the included grease on to the hex bolt thread.

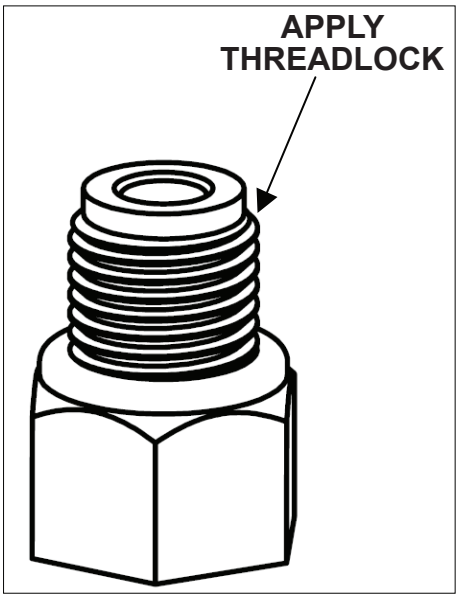



- Reinstall the hex bolt on to the shock rod and tighten clockwise until it stops. Loosen the hex bolt 8 turns counter clockwise.

⚠ If the hex bolt is not loosened correctly, the motorshaft may not function properly. Uneccesary loads applied to the motor may result in mechanical failure.

⚠ Make sure that the hex bolt screws in the shock shaft without any unusual resistance. Do not force the hex bolt in if the threads may be damaged.

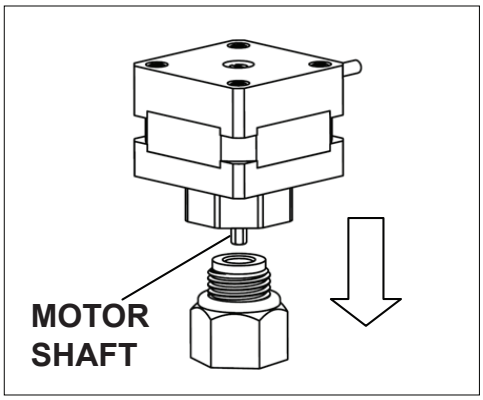
⚠ Do not overtighten the hex bolt. Doing this may apply unneccesary load to the shock internals and will affect the dampening adjustment feature.

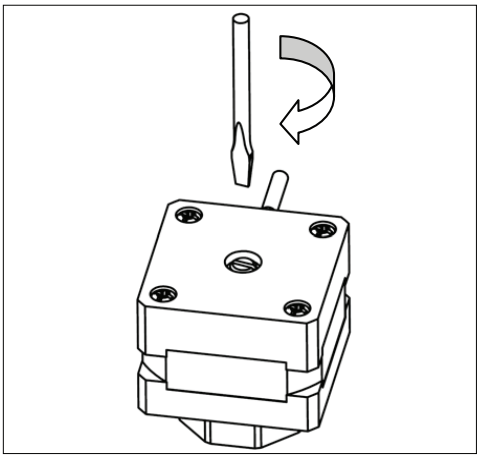


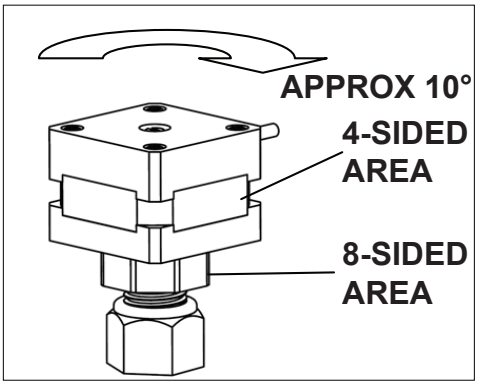

- Apply the included thread lock to the threads of the shock shaft.

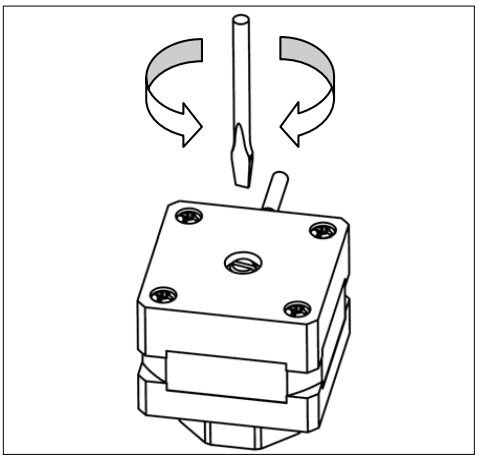
⚠ Make sure that the thread lock does not enter inside of the hex bolt area or the dampening adjustment feature will not function.

# MOTOR INSTALLATION





Confirm before installation that the motor assembly fits on top of the shock shaft without any issues. Make sure that the threads without any issues.

Some suspension kits may feature different shock shafts on the front or rear. Please take this into account before beginning installation.

- Peel the rubber cover off the motor units.
  ※The rubber cover does not come off the harness portion
- Slide the hex end of the motor onto the shock shaft. Hand tighten the motor by turning it clock-wise until a small amount of resistance is felt. Begin turning the motor with a flathead screwdriver clock-wise until the unit is lightly snug.

If the motor shaft hex portion is not properly inserted into the shock shaft, the assembly may not perform as indicated.

Do not overtighten the motor assembly or stop turning when any irregular resistance is felt. This may result in stripped hex bolts.

- Torque down the motor assembly.
  Approx 10° from stopping point indicated above.

Torque specification 3N-m (0.3kgf-m)

Never tighten the motor assembly by handling it at the 4-sided area.

Exceeding the indicated torque specifications may apply unnecessary loads to the motor resulting in failure.

- Using a flathead screwdriver, loosen the motor five revolutions counter clock-wise to check that the it turns smooth.
- Put back the rubber cover on to the motor assembly.

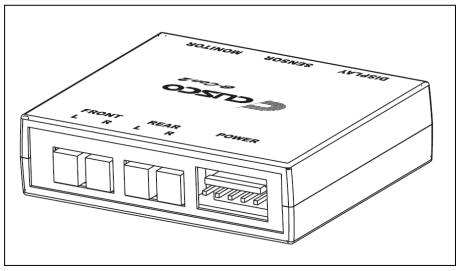
Pulling the rubber covers forcefully may damage the electrical wires. Please handle gently.

- Once the control box, wiring harness, and motors have been installed, hold down and reset the e-con2.
  Reset Buttons ◥ + ■ + ◣ (hold down)
  ↓
  ■ (hold down)

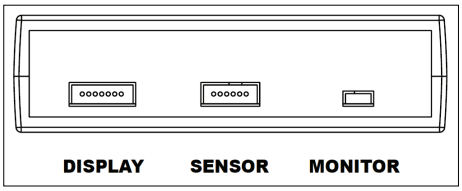
※ The motors will be automatically reset at this point. (Module will check for dampening parameters)

## MOTOR MAINTENANCE

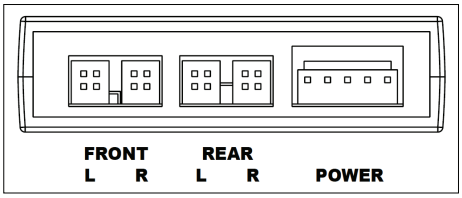
- Resetting the motors periodically will maintain proper dampening levels. Dampening position may become offset if the rest procedure has not been performed for a long period.
- Reapplying grease to the hex bolt periodically will prolong motor life.
- Disconnect the motor connectors when performing vehicle height adjustment.



Controller Box



Controller Box: Front



Controller Box: Rear

# e-con2 CONTROLS

■ ◥ ◣ Hold down (3 sec.) ◹ □ ◺ Single Click

## Damper Adjustment

■ → SHOCK Mode
- → ◺ Adjust Front
  - ◥ Harder → □ Enter
  - ◣ Softer → □ Enter
- → ◹ Adjust Rear
  - ◥ Harder → □ Enter
  - ◣ Softer → □ Enter

## Setting Memory Profile

Setting Damper Rate Profiles → ◥ ◣ Choose memory slot to save in (Ŧ Ŧ Ŧ Ŧ)
- □ Cancel Memory
- ■ Save Memory

## Switching Between Saved Memory Profiles

■ → SHOCK Mode → □ Ŧ → □ Ŧ → □ Ŧ → □ Ŧ

Memory 1 Memory 2 Memory 3 Memory 4

## Vertical or Landscape Display

■ → SONAR Mode → ◣ Switch Mode → □ Vert or Landscape Mode → ◹ ◺ Switch → □ Enter Save → ■ SHOCK Mode

## Changing Display Color

■ → SONAR Mode → ◥ Shine Mode → ◹ ◺ Switch Colors → □ Enter Save → ■ SHOCK Mode

## G-Sensor (Option)

■ → SONAR Mode → ◥ ◣ Switch to SONAR Mode → □ G-Sensor Display (Letter "G" Lights Up) G→Demo 1→Demo 2→Demo 3

- ◥ Switch G Range Mode → ◹ ◺ Choose LO: 0.5G Ŧ HI: 1.56G Ŧ → □ Enter Save → G-Sensor Display
- ◣ Recall Peak → ◹ Front/Rear ⟷ Right/Left Switch → ◥ + ◣ Hold Down to Reset Setting → G-Sensor Display